

Miller, Walker, and Salmon Basin Plan Project Management Team Meeting

Date: Thursday October 16, 2003

Time: 9:00AM – 12:00PM

Location: City of Burien City Manager's Conference Room

Meeting Summary

Attendees

Dan Bath	City of Burien
Bruce Bennett	King County
Steve Bennett	City of Normandy Park
Steve Clark	City of Burien
Curt Crawford	King County
Roger Kuykendall	Gray & Osborne (for the City of Normandy Park)
Mehrdad Moini	WSDOT
Dale Schroeder	City of SeaTac
Bob York	Port of Seattle
Julie Cairn	King County

Announcements and General Business

Meeting summaries for the 9/11/03, 9/18/03, and 10/2/03 PMT meetings and the two public meetings were distributed before the meeting via email.

Curt offered some comments on the Miller and Walker public meeting notes (identifying discussion items that were not reflected in the notes). PMT members were asked to provide any corrections on these five items to Bruce by close of business October 24. The summaries and notes will be finalized at that time with the incorporation of any comments received.

Please make sure project billings have been submitted to your accounting organizations for processing. There are several agencies that have not paid their bills yet.

Public Meeting Follow up

PMT members were generally pleased with the public meetings. Participants appeared to appreciate the information, and look forward to continued opportunities for involvement. Julia Patterson was very complimentary of the effort.

Bruce and Curt talked further with Shawn McIlvoy following the Miller and Walker public meeting, regarding his comments about the estuary restoration project that the

Action items are highlighted

Normandy Park Community Club is proceeding with. Apparently the Community Club is proceeding with a salt marsh restoration project. They have permits in hand. Mr. McIlvoy's opposition to a basin plan recommended estuary restoration project is strong, but mostly related to implementation issues, not the results it might achieve. This issue is worth further discussion. Some of this resistance is likely related to concerns raised during King County's prior efforts to scope an estuary enhancement project for the Community Club (about 10 years ago). King County asked for information regarding the Community Club's current project.

At the PMT meeting, Steve Bennett offered to provide Bruce Bennett with copies of planning documents for the project, since the Normandy Park Community Club had to submit them to the City of Normandy Park for approval. The City of Normandy Park placed development conditions on the project, including the traditional performance bond.

Steve characterized the scope of the project as dredging out Walker Creek, revegetating the stream bank, and creating a settling pond upstream of the duck pond to reduce the silt delivered to the duck pond.

Northwest Hydraulic Consultants Letter Regarding Hydraulic Modeling

Northwest Hydraulic Consultants (NHC) staff, on behalf of the ACC, met with King County hydrologic modelers in July, and have subsequently evaluated the Miller and Walker Creek modeling efforts conducted for the basin plan project. They submitted a letter on October 1st with their evaluation results.

Generally, they were complimentary of the modeling work that has been conducted to support the basin plan. They acknowledged some of the difficulties that the county and Port modelers had in calibrating the model, and in looking at the differences in basin geology data, and they compared and contrasted the different ways that the Port modelers and the King County modelers took to resolve these calibration difficulties. The NHC consultants had four specific recommendations:

1. Conduct a model run that presumes that the third runway is NOT constructed.

This model run has now been completed, based on PMT direction at the October 2 PMT Meeting. The results of this model run are discussed below.

2. Factor the Port's low flow augmentation vault into the model runs.

The low flow augmentation vault adds 0.11cfs flow to the system from August 1 through October 31 of each year. This has been incorporated into recent model runs.

3. Evaluate data from the Port regarding Industrial Wastewater System (IWS) leakage, to determine if this might account for some of the calibration discrepancies in the model runs, and the extensive groundwater component in the basin.

At the PMT meeting, Bob York provided some information about the IWS system:

The oldest portions of the system were constructed in the 1960's, and are concrete bell and spigot pipe.

Action items are highlighted

The Port has a program in place to do ongoing video inspections, and to implement capital projects in response to identified problems. Much of the remediation is *in situ* rather than removal and replacement.

The IWS treats stormwater collected in areas of the airport where de-icing and refueling activities occur (terminal and maintenance areas). The majority of the flow to the IWS is stormwater.

The Port has IWS flow data and lagoon data that should be useful to conduct a rough mass balance of flows.

In response to the NHC letter, Bruce will ask Kelly Whiting to talk to the NHC consultants about the information they have reviewed and their concerns on this issue.

4. Conduct field investigations to determine if there are errors in soils mapping that might be contributing to calibration problems, and the resulting underestimation of peak flows.

The PMT felt this was a good suggestion, but based on available resources, is probably unrealistic. The Port and the county both used the USGS soils data that was the basis of the calibration.

The PMT felt that the basin plan could address this uncertainty without resurveying all of the soils mapping, and even though there are differences in the actual and predicted peak flows, these discrepancies are relative across the model runs.

Evaluating the soils mapping could be considered for recommendation in the basin plan report as a future work item.

King County staff did speak with NHC staff briefly before the letter was finalized. They discussed the difficulties with calibrating the model, and the frustrations this causes. The NHC staff were asked what they would do differently. They did not have a different approach to recommend.

Low Flow Model Run Results

Low flow model runs for Salmon, Miller, and Walker have been completed. These runs incorporate the additional 0.11cfs flow from the Port into Walker Creek.

Bruce needs to follow up with the modelers regarding the Miller low flow result, and their explanation that evapotranspiration accounts for results that are not necessarily intuitive. These results may also be artifacts of the scale of the model run data, and may simply be noise.

If the low flow model runs are correct as presented, they show that low flows are not a significant problem in Salmon, Miller, or Walker Creeks.

No Third Runway Model Run Results

The PMT reviewed peak flow and flow duration analyses that assumed no third runway construction and no associated mitigation. A 1995 land cover was used and development was assumed to occur in parcels in which the improvement value was less than the land

Action items are highlighted

value. The flow curves for Miller and Walker showed that there is a benefit to the streams from the Port's proposed mitigation for the third runway (i.e., peak flows and flow durations are reduced in the 3rd runway scenario vs. the no 3rd runway scenario). This is because (1) the Level 2 – 75/15/10 detention standard required by Ecology is a restorative standard (i.e., it's better than the existing conditions), and (2) the Port is also required to retrofit its existing development for both water quantity and quality.

Discussion of Flow Control in the Basins

The PMT discussed the potential flow goals for the basins, and the options available to achieve the goals.

After lengthy discussion, the group agreed that meeting the basin-wide flow goal of 75/15/10 (the BDHA line) in each of the three basins was appropriate. The group also acknowledged that this might not be a realistic goal, especially in the short term, so some additional analysis is required to look at the various ways this goal could be attained.

It was also discussed that the model runs to date implementing Level 2 flow control for new or redevelopment (Scenes 2 and 4) were based on a fully forested pre-development condition (Level 2 – Forested). It could be argued that Level 2 flow control based on 75/15/10 pre-development conditions is more appropriate. The latter is consistent with what Ecology is requiring of the Port.

Based on an actual property in the basin, a developer required to meet Level 2 - Forested could need to provide 30% more storage on a site than if they were required to meet Level 2 - 75/15/10.

If there were already a shortage of storage to meet the basin-wide goal to reduce flows to the 75/15/10 level, the lower development requirements would increase the gap to be made up through other means.

Flows in the basins can be reduced by the following methods:

1. Development/redevelopment regulations (primary burden on developers)
2. Retrofit requirements, including regional detention ponds (primary burden on local governments or agencies – citizen funded through rates, fees, and taxes)
3. Some combination of 1. and 2. (shares the burden)

Overall, we need to find a way to share the burden to address this problem. If the burden all goes to the developers, it would likely discourage development and redevelopment, and it could potentially lead to legal battles. On the other hand, we cannot put the entire burden on the citizens via taxes, rates, and fees imposed by local or regional entities.

Note: The new Ecology Manual requires Level 2 Flow Control based on forested pre-development conditions, unless a basin-specific recommendation is made and justified through a basin planning process.

Recommending something less than Level 2 - 75/15/10 in Miller or Walker Basins is likely to be a hard sell to Ecology. The Des Moines Creek Basin Plan recommended a

Action items are highlighted

Level 1 Flow Control standard, but it was coupled with significant regional detention and a bypass line requirement.

If the basin plan recommends a flow target in the basin at the 75/15/10 line, is it ok to reduce flows to get to this target over a 20-year period as development/redevelopment occurs, or do we need to recommend projects that would get us toward that flow target sooner (constructing regional detention or doing system retrofits)?

As we discussed the various approaches, Burien staff named a few potential locations for small regional flow and/or water quality facilities or projects:

- NE redevelopment area
- Between Arbor Lake and the Kennedy School property (channel reconstruction)
- Kennedy School property
- Albertson's property
- Ambaum Pond
- Hermes/Mayfair Pond area



For Miller and Walker, the PMT requested that the technical team look at modeling data to estimate what it would take to achieve the basin-wide 75/15/10 goal (BDHA line) given various combinations of public and private funding. Some previous cost estimates were based on vault costs of \$5/cf. Bob from the Port thought this vault cost estimate might be a bit low and suggested \$10/cf.

For the Salmon Creek Basin, the PMT agreed that Level 1 flow control is acceptable, as long as the bypass is maintained. Water quality improvements ARE required, however.





Future Meetings

The PMT agreed that PMT meetings should be scheduled for 10/30, 11/6, and 11/13. An Executive Committee meeting will be scheduled for 11/20. Public meetings for Salmon and Miller/Walker will be scheduled for 12/4 and 12/11.

Related Attachments

10/01/03 Letter from NHC on Basin Plan Modeling	 "NHC basin plan comments Oct 1 200:"
9/11/03 PMT Meeting Approved Summary	 "091103 PMT Meeting Summary.do"

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9/18/03 PMT – Executive Committee Approved Summary	 "091803 Exec-PMT Meeting Summary.doc"
10/2/03 PMT Approved Summary	 "100203 PMT Meeting Summary.doc"
Salmon Creek Public Meeting Final Notes	 "Salmon Public Meeting Notes.doc"
Miller and Walker Creeks Public Meeting Final Notes	 "Miller Walker Public Meeting Notes.doc"

Action items are highlighted

FINAL on 10/30/03

October 1, 2003

Mr. Gary Long
City Manager
City of Burien
415 S.W. 150th St.
Burien, WA 98166-1973

Mr. Merlin MacReynold
City Manager
City of Normandy Park
801 S.W. 174th Street
Normandy Park, WA 98166

Re: King County Basin Plan for Miller, Walker, and Salmon Creeks.

Dear Sirs:

Per your request, we have reviewed the hydrologic models being developed by King County for basin planning in the Miller, Walker, and Salmon Creek basins. Our review focused on the Miller and Walker Creek models and the assumptions made for the area of the Seattle-Tacoma International Airport (STIA). In previous work for the ACC, we commented extensively on hydrologic modeling performed by the Port's consultants for proposed airport development activity. The main purpose of the review summarized here was to determine whether the King County modeling is consistent with, or may produce results which could affect, the design of stormwater facilities proposed in the Port's Comprehensive Stormwater Management Plan (CSMP) for the airport, as required by the Department of Ecology's Section 401 Certification for airport improvements.

On July 25, 2003, Malcolm Leytham and Bill Rozeboom of Northwest Hydraulic Consultants met with King County staff Kelly Whiting, Bruce Bennett, and Jeff Jacobson and were briefed on the basin modeling. The King County staff provided us with hard copy plots of basin boundaries and calibration results, digital copies of hydrologic model files, and a verbal description of the model approach and assumptions.

General Findings

The County models are based on an independent calibration, by county hydrologists, to the streamflows which have been observed in the basins. Relative to the previous calibration by the Port's consultants, the fit of the simulation results to the observed flows was not significantly changed or improved by the county's independent calibration. Calibration to Walker Creek flows in particular is poor in both the Port's

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and County's models, with continued significant undersimulation of peak flows and with a continued trend in differences between simulated and observed daily average and mean annual flows over the 3-year calibration period. For the upper Walker Creek stream gage, mean annual flows are undersimulated by -28% (-0.42 cfs) in WY 1994, undersimulated by -5% (-0.09 cfs) in WY 1995, and oversimulated by +9% (+0.18 cfs) in WY 1996. We had previously speculated that expansion of and improvements to the airport Industrial Wastewater System (IWS) within the Walker Creek basin might be a cause of apparently-declining stream flows over this period. Specific technical differences between the models are described below.

For non-STIA areas, the County's models are slightly different from the Port's models both in terms of the effective impervious area and hydrologic response of pervious areas. For STIA areas, the County's models use the same land use breakdown and effective impervious acreages found in the Port's models, but the runoff response from specific pervious areas (such as till-grass) is different because of the independent calibration. Also, the King County models do not use the "Runway Fill" soil type found in the CSMP to represent the proposed third runway fill embankment and instead simulate the fill areas as till grass soils. The county assumptions for fill areas will produce higher peak flows and greater surface runoff volumes and allow less infiltration than the parameters assumed in the CSMP. If the Port's consultants had used the same assumptions now being used by King County for areas of runway fill, stormwater detention ponds for those areas would be larger than the ponds described in the Port's CSMP. In our opinion, the County's treatment of runway fill is qualitatively consistent with low infiltration rates inferred from observations in January, 2002 of numerous pools of standing water on a test section of embankment.

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The King County work is using a 15-minute precipitation data set. This is different from the models for the Port's CSMP and Low Flow Analyses, which all used a 1-hour data set. We previously recommended that the Port should have used 15-minute data for the low flow analysis and the embankment infiltration evaluation, but that recommendation was ignored. Use of 15-minute data will result in the models producing slightly less infiltration and more surface runoff than would be simulated with 1-hour data. This is likely of little consequence in the sizing of peak flow control facilities. However, if the Port's consultants had used the same precipitation data set and modeling time step now being used by King County for the basin plans, the reserve storage facilities to offset low flow impacts would likely be larger than the facilities described in the Port's Low Flow Analysis.

King County has not undertaken a STIA-specific low flow analysis such as described in the Port's December 2001 Low Streamflow Analysis and Summer Low Flow Impact Offset Facility Proposal. The Port's Low Streamflow Analysis was performed separately from the Port's CSMP and included evaluation of factors such as cessation of residential irrigation withdrawals and removal of septic tank discharges in the buy-out area. The majority of the Port's low flow assessment involved a hybrid (linked HSPF-Slice-Hydrus model) analysis of the hydrologic response of the runway

embankment. In our earlier comments we were critical of many aspects of the hybrid analysis, including very poor model calibration to low flows and, in our opinion, significant overestimation of the infiltration capacity of the runway fill. The county models do not re-visit or address any of these issues. Instead, as described above, the County models take a more conventional approach in which the embankment areas are represented as till grass.

The county's models include one scenario of future unmitigated conditions in which the basins are fully developed without any stormwater detention facilities at the airport or elsewhere in the basins. This "future" scenario is intended for modeling purposes to establish an upper bound of development impacts and is not proposed as a realistic development scenario. The majority of the county's models involve future mitigated conditions which simulate flows resulting from alternative stormwater detention standards, applied basin-wide, for new development and redevelopment areas.

Our review has confirmed that the King County models of future mitigated conditions do incorporate the stormwater detention ponds described in the Port's July 2001 update to its December 2000 Comprehensive Stormwater Management Plan (CSMP) for STIA Master Plan Update Improvements. The Department of Ecology's Section 401 Certification for the STIA Master Plan Update Improvements requires that this CSMP be implemented in its entirety. The King County models developed as of July 2003 are consistent with implementation of the CSMP in its entirety. The King County models of future flow control scenarios do not consider any alternatives to or departures from the peak flow control detention facilities identified in the CSMP. The models furthermore do not analyze any scenarios in which the third runway is not constructed.

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Our review has confirmed that the King County models of future mitigated conditions do not incorporate the Walker Creek low flow reserve storage facility which is proposed in the Port's Low Streamflow Analysis and Summer Low Flow Impact Offset Facility Proposal (Low Streamflow Analysis), but not described in the Port's CSMP. The CSMP states that a more comprehensive evaluation of low flow impacts is presented in a separate Low Streamflow Analysis, but fails to acknowledge that additional major stormwater facilities are proposed by the Port and are required by Ecology to mitigate for low flow impacts in Walker and Des Moines Creeks. The Port's Low Streamflow Analysis document recommends construction of a 19.0 acre-foot reserve storage vault in the Walker Creek basin to compensate for low flow impacts. This vault is to be in addition to the Walker Creek 10.9 acre-foot detention pond per the CSMP. No low flow facilities are proposed by the Port, or are being required by Ecology, for the Miller Creek basin.

The Port owns STIA properties that are not proposed to be developed as Master Plan Update Improvements and for which no stormwater facilities are identified in the CSMP. For basin areas not covered under the CSMP, the King County analysis has evaluated the future development potential and the future stormwater facility

requirements without regard to property ownership. Consequentially, the King County models of future mitigated conditions include development and/or redevelopment of some Port properties that are assumed in the CSMP to remain undeveloped. This analysis approach is reasonable and is also consistent with requirements of the September 4, 2003 NPDES permit issued by Ecology for the airport. That permit (Part II, section S5.A.5) includes a statement that facilities not included in the CSMP undergoing new development or redevelopment will apply the applicable minimum requirements of the appropriate, most current Stormwater Management Manual available.

Interpretation and Recommendations

The work to date by King County appears to have been performed in a thoughtful manner using assumptions which are generally conservative with respect to the impacts of future development on receiving waters (15-minute model time step; airport fill modeled as till grass), which we support and which represent an improvement over the modeling performed for the Port's CSMP. The county models are otherwise consistent with the implementation of the CSMP in its entirety, as required by the Department of Ecology Section 401 Certification for STIA Master Plan Update Improvements. At this time we have four recommendations to improve the King County basin plan models.

Our recommendations follow:

1. The basin models should include at least one scenario of future mitigated conditions in which the third runway is not constructed. The basin plan scenarios evaluated to date do not provide the basic technical information to evaluate whether the proposed mitigated effects of MPU improvements, including the third runway, have hydrological effects which are significant at a basin scale. The issue is relevant because of the continuing legal appeals over the project and the fact that the Port-proposed and Ecology-required flow mitigations are different than would be normally required under the current King County and Ecology Stormwater Manuals.

Basin Planning Project Management Team (PMT) meeting notes from 03/06/03 state that it is not the PMT's intent or charge to debate, evaluate, support, or oppose the Port's mitigation plan or the third runway project. For the PMT to be politically neutral on the issue of the third runway, the basin planning process cannot be limited exclusively to scenarios which presume that the third runway is constructed.

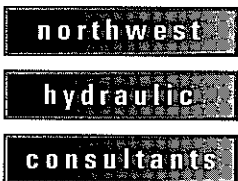
2. All basin models for Walker Creek which include future construction of the third runway development should consistently include the 19.0 acre-foot reserve storage low flow augmentation vault proposed in the Port's Low Streamflow Analysis.

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3. King County should obtain available information on the recently-implemented program of leak detection and repair for the airport IWS system program, and evaluate if this information could be used to improve the calibration of the Walker Creek hydrologic model. A major challenge in calibrating the Walker Creek model has been that the recorded streamflows, especially groundwater base flows, are much higher than can be accounted for by the basin tributary area. The airport IWS system occupies approximately one half of the 640-acre Walker Creek groundwater recharge area, and we have speculated in previous reviews of the Port's Low Flow Analysis that IWS system leakage might be partially responsible for the discrepancy in simulated versus recorded low flows. Testimony dated March 2002 by Port representative Keith Smith to the State Pollution Control Hearings Board confirmed that a recent IWS leak detection and repair program found defects (leaks) in the IWS collection system¹. We recommend that the details of this leak detection and repair program be obtained and independently evaluated by the King County hydrologists performing the Walker Creek HSPF modeling.
4. Despite efforts by a number of parties to improve hydrologic model calibration, peak flows on Walker Creek continue to be significantly undersimulated and should not be relied on for the design of any capital improvements. The continuing difficulties in simulating flows on Walker Creek reinforce comments we have made previously that the hydrology of Walker Creek is poorly understood. We suggest that the County perform field investigations to determine whether error in soils mapping is a possible contributing factor to the undersimulation of peak flows.



Please feel free to contact either myself or Malcolm Leytham if you would like further discussion of our review findings or recommendations.

Yours truly,

NORTHWEST HYDRAULIC CONSULTANTS, INC

A handwritten signature in black ink, reading "Bill Rozeboom".

William A. Rozeboom, P.E.

war/kml/smd

¹ Mr. Smith's testimony was that 30% of IWS pipes were inspected, that 121 defects were found, and that about 13% of pipes required repair. If 13% of all IWS pipes required repair, but only 30% of all IWS pipes were inspected, it follows that 43% (13/30) of the inspected pipes were defective.

Miller, Walker, and Salmon Basin Plan Project Management Team Meeting

Date: Thursday September 11, 2003

Time: 9:00AM – 12:00PM

Location: City of Burien City Council Chambers

Meeting Summary

Attendees

Dan Bath	City of Burien
Bruce Bennett	King County
Steve Bennett	City of Normandy Park
Steve Clark	City of Burien
Curt Crawford	King County
Bob Duffner	Port of Seattle
Roger Kuykendall	Gray & Osborne (for the City of Normandy Park)
Mehrdad Moini	WSDOT
Dale Schroeder	City of SeaTac
Kimberly Lockard	King County Council Staff
Julie Cairn	King County

Approval of minutes

August 21 PMT Meeting Summary

The PMT approved the 8/21/03 meeting summary as revised.

September 4 PMT Meeting Summary

A few PMT members asked to have an additional day to get feedback to Bruce for the September 4 Meeting Summary. If there are no additional comments by COB September 12, the September 4 summary will be finalized as drafted.

Duration Analysis Discussion (continued)

Bruce handed out flow frequency and duration analyses graphs to be used to discuss outstanding questions from an earlier meeting.

Question - On Walker @ DMMD, for the most frequent storm flows, why are the duration analyses lines for BDHA and Forested above the Current and Future lines?

Answer – It is a base flow issue. Because the ground water basin is larger than the surface water basin in Walker, there are ample base flows. In the Forested and BDHA

Action items are highlighted

FINAL on 10/27/03

runs, these flows enter the stream largely unimpacted by development. In all the other model runs, the amount of base flow is reduced due to development occurring over outwash soils. The rain falling on the development during frequent storm events is not allowed to infiltrate to ground water and, therefore, small reductions in stream flow are noted. During less frequent storm events, the magnitude of water running off impervious surfaces is a larger contributing factor to stream flows than base flow.

Low Flow Information

This is still an outstanding item. Data will be presented soon.

Executive Committee and Public Meeting Content and Structure

Curt handed out a proposed revision to the Project Goals and Objectives. This was a revision and expansion of the Technical Team findings and recommendations document regarding hydrology, ecology, and water quality. The goal was to transform the technical team matrix into something appropriate for the Executive Committee meeting (9/18) and the upcoming Public Meetings (9/25 and 10/2).

Based on extensive discussions, the materials were transformed into something thought to be better suited for the management and public audiences. These materials would be presented to the Executive Committee on 9/18 as a “dry run” for the public meetings.

Logistics for the public meetings were discussed.

Miller, Walker, and Salmon Basin Plan Executive Committee and Project Management Team Combined Meeting

Date: Thursday September 18, 2003

Time: 9:00AM – 11:00AM

Location: City of Burien City Manager's Conference Room

Meeting Summary

Attendees

Dan Bath	City of Burien
Bruce Bennett	King County
Steve Bennett	City of Normandy Park
Curt Crawford	King County
Bob Duffner	Port of Seattle
Michael Feldman	Port of Seattle/SeaTac
Rod Hansen	King County
Gary Long	City of Burien
Merlin MacReynold	City of Normandy Park
Mehrdad Moini	WSDOT
Don Monaghan	City of SeaTac
Bruce Rayburn	City of SeaTac
Dale Schroeder	City of SeaTac
Craig Stone	WSDOT
Julie Cairn	King County

Introductions and Upcoming Items

September 25 – Salmon Creek Basin Public Meeting

October 2 – Miller and Walker Creeks Public Meeting

Public Meeting Material Presentation and Discussion

The purpose of the Executive Committee meeting is to review the project progress to date, share the findings, go over the material that is planned for discussion at the upcoming public meetings, and get input and responses from the Executive Committee membership in advance of the public meetings.

Bruce went through the public meeting materials and the group discussed the scope, content, and organization. Based on extensive discussions, the materials were modified and refined for use at the public meetings.

Some suggestions for the public meeting presentation included:

- Identify and discuss “implementation challenges” for the potential solutions identified.
- Clarify the terminology to be used for flows – peaks versus durations
- Clarify the terminology – near shore vs. estuary

Other Items

During the course of the discussion, several items came up for later consideration or action. They were:

- Hydrology and Geology 101 Handouts might be useful on the Web or for the 2nd round of public meetings.
- Background information on Urban Creeks might be useful.
- Comment cards should be distributed at the meeting and the Q&A session should be extended past 8:00 if there is interest.
- The presentation should emphasize the inter-related nature of the three goals for the basins.
- Are there linkages between Puget Sound Salmon Recovery Conservation Planning efforts and this Basin Plan? Should there be?
- Burien has recently initiated the design phase of improvements for 1st Avenue. If there are things that the basin plan might recommend that could be addressed in their project, NOW is the time to make that known and to potentially provide input. The opportunity will be lost in a matter of months.
- The Basin Plan text should be written to provide support for grant applications, if a recommendation is to purchase land (like for the Walker headwater wetland).
- Are the flow control strategies we are considering for restoration purposes or preservation purposes?
- What are the overall goals – to preserve the resources or to improve the resources?
- The PMT needs to get the input from the ACC on their assessment of the modeling.
- The City of Burien is concerned about the adequacy of the Southwest Suburban Sewer Districts Operations and Management, and potential adverse impacts on these streams and on Puget Sound. Burien is potentially interested in engaging King County to help look at this.

Miller, Walker, and Salmon Basin Plan Project Management Team Meeting

Date: Thursday October 2, 2003

Time: 9:00AM – 12:00PM

Location: City of Burien City Manager's Conference Room

Meeting Summary

Attendees

Dan Bath	City of Burien
Bruce Bennett	King County
Steve Bennett	City of Normandy Park
Steve Clark	City of Burien
Curt Crawford	King County
Bob York	Port of Seattle
Roger Kuykendall	Gray & Osborne (for the City of Normandy Park)
Dale Schroeder	City of SeaTac

Discussion of Salmon public meeting

The following comments were made:

Overall, good presentation

Need better overheads and graphics

Presentation can get side-tracked when showing photos – be careful

Historical overview of basins was good

With a larger group will need to hold questions until the end of the presentation

Combine Miller and Walker bullets to make one set

Add 1st Av. S for Walker as a potential fish passage barrier

A citizen at the Salmon public meeting asked whether the Miller/Walker and Salmon plan should be separated to avoid any hangups of one basin impacting the others. The PMT agreed that this made sense. The Salmon basin plan will be a separate plan from the Miller/Walker basin plan.

Preparation for Miller/Walker public meeting

The PMT discussed whether a “no 3rd runway” modeling option should be included. It was decided to go ahead and make the model run with a 1995 land cover for the airport, no 3rd runway or any associated mitigation, and other potential future development instead (red parcels).

Scheduling of future meetings

This item was tabled until the next meeting.

**Salmon Creek Basin Public Meeting
September 25, 2003
Shorewood Elementary School**

Public – 4 participants

KC and Partner Agency staff – 8 participants

Meeting Questions/Discussion Items/Comments from the Public

Question about the fish productivity terminology – are the numbers quoted “spawners” or “fish produced” in the system.

Many local residents don’t even know that Salmon Creek exists in their neighborhood – which can be good or bad. It’s not bothered, but it’s also not protected.

Public participant perception is that Salmon Creek is in pretty good shape – maybe because it is unknown.

One participant attended court hearings to get the culvert(s) under Shorewood Drive enlarged. One participant present was under the impression that the culvert was initially installed improperly (by King County), and that is why it has become a problem.

Public members asked if we were looking at Shorewood Drive culvert replacement in addition to looking at culvert retrofits.

What are the diameter, length, and grade of this culvert?

Several participants noted that there are very inviting walking/hiking trails along Salmon Creek.

City of Burien staff asked the public participants how successful they thought stewardship efforts would likely be. The public members present thought that citizens would be very likely to get involved and to help do things in the basin if they see evidence that their efforts would be beneficial. Steve Clark (City of Burien Public Works Director) gave his card to the public participants that were present.

The public members present thought others would get involved if they realized that their help was needed.

The Shorewood on the Sound Community Club is a likely group to engage to get citizen involvement. Schools are another potentially effective outreach mechanism.

The City of Burien has purchased some property at/near Seahurst Park and is working to restore this area.

How do citizens get involved? What is the timeline, and what are the opportunities for citizen involvement/participation?

A public participant asked whether the partners had considered preparing two separate plans rather than combining Salmon with Miller and Walker. Will a combined plan be more difficult to get adopted if an agency has interests in one of the basins but not the others?

There was a discussion about field sitings of muddy water downstream of the Southwest Suburban Sewer District plant, and follow-up activities that field or partner agency staff took to investigate this. The plant was not confirmed as the source of the dirty water, but there might be plant maintenance activities that contribute dirty looking water to the Creek on occasion, based on discussions with plant staff. There was a silt tank rinse out that may have corresponded with the field trip timing, and that may have caused the dirty water.

One public participant present at this meeting was surprised to hear the information above, because Southwest Suburban has retrofitted their plant in the Miller basin to increase recycling and reduce any negative impacts from plant operations and/or maintenance activities, and is very proud of their improvements.

There was a concern from public participants that the project team's "perception of historical conditions" may not be accurate, and that historical societies should be conferred with to ensure the accuracy of historical conditions.

There was concern that the public meeting advertisement had not been adequate, and that more effort should go into advertising future events. Some suggested mechanisms for outreach are –
Shorewood on the Sound Community Club
Local schools
White Center News
Seattle Times and or P-I

It was noted that the Highline Times had been used to advertise this event, as well as several City of Burien events, and a City of Burien Press Release.

**Miller and Walker Creek Basins Public Meeting
October 2, 2003
Criminal Justice Training Center**

Public – 33 participants
KC and Partner Agency staff – 14 participants

Meeting Questions/Discussion Items/Comments from the Public

Q: -- Regarding our statement that erosion is not a significant problem in the Miller and Walker basins, are we measuring sediment accumulation at facilities, that is removed as part of ongoing maintenance?

A: -- Ambaum Pond does not require an excessive amount of maintenance. Normandy Park cleans out the sediment accumulated at 13th Ave SW twice a year.

Suggestion – Keep more formal track of sediment depths removed from facilities.

Q: -- What are the potential methods to reduce scouring? What are the estimated costs?

A: -- Method is to increase detention. Costs could be borne by developers for new development (regulatory approach), and/or they could be borne by local governments or agencies to construct regional detention facilities. Some combination or hybrid of these is likely. Don't have costs yet.

Q: -- How do we protect the headwater wetlands from pollutant sources, whether they are outfalls from large upstream areas or commercial point sources of contamination?

A: -- Bog Protection Standards could be applied to the resource, and water quality treatment could be required for pollution-generating activities. Note – Water quality treatment of stormwater was not required when the majority of the basin was initially built out, so water quality treatment is generally non-existent in the basin.

Comment - One participant was concerned that the Project Team might be focused on the “cheap solutions” rather than the “right solutions”

Response – We are not looking at “cheap solutions”, but we must look at “cost-effective” solutions. At some point, we must also look at “implementable” solutions.

Comment – Normandy Park Community Club is proceeding with a stream enhancement (salt marsh restoration) project. They have their required permits and are ready to go. They are concerned about pollutants coming from upstream, and that their work will be of little benefit if measures are not taken upstream.

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Response – We are interested in finding out more about the scope of this project, and how this work might complement potential restoration projects recommended through the basin plan. Mason Bowles will follow up with Community Club members or permitting authorities to learn more about the project.

Comment: The presentation pointed out that the City of Normandy Park is doing work on the 1st Avenue South Culvert, and that this would help some of the drainage-related problems. A concern was expressed that the work that is being done by Normandy Park is only an emergency fix, and that it is not a long-term solution.

Comment – The headwater wetlands are mapped incorrectly.

Response – King County staff are aware that all of the wetlands are mapped much smaller than they actually exist and will recommend that changes in wetland mapping be made.

Q: – Based on public discussion, this particular wetland used to extend to 168th and 12th, which is even larger than County staff were aware of. This was apparently changed dramatically during airport construction and during SR509 construction. How did these activities affect the hydrology of the basin?

A: – We're not sure. We'll investigate this matter further.

Comment – One participant was under the impression that the Port would be piping Miller Creek.

Response – The Port representative on the PMT noted that this is inconsistent with what is in the Comprehensive Stormwater Management Plan (CSMP) and that this impression is inaccurate.

Q: – If the basin plan looks at stormwater detention, can it look at vaults as well as ponds?

A: – Yes, vaults are an option (the Port's facilities will be a combination of ponds and vaults), but they are about twice as expensive as ponds.

Q: – The notes commented that current water quality data (chemistry) is lacking. How do we think we will fill these data gaps? What about using water quality data loggers? Also, in terms of water quantity data, there are lots of good flow monitoring technologies available if current flow monitoring data is also inadequate.

A: – Agreed, there are lots of good technologies for gathering flow monitoring and water quality data. One of the recommendations of the basin plan is very

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likely to be to develop and implement a flow monitoring and water quality monitoring plan for Miller and Walker Creeks.

Q: – Several public participants that live on or near the Creeks noted large surges in flows in the Creeks in periods when there were not storms or precipitation (middle of August on Walker Creek was one time). If this happens again in the future, what should these citizens do?

A: – County staff will go back to see if data exists that might confirm this and help determine the causes of the increased flows. In the future, citizens should contact their local jurisdiction to report this type of event.

Comment – This basin planning process (for Miller and Walker Creeks) began 10 years ago. In order for it to be successful, honesty and creative solutions will be required.

Comment – While fish resources are important, one participant was concerned that the plan would be boiled down to a price tag per potential fish returned, without looking at the entire ecosystem and the benefits to it.

Response – We agree that the plan should be more than a cost per fish analysis and the plan will reflect an ecosystem approach, although basic ecosystem data is sorely lacking.

Comment – Some participants were concerned that the brunt of the work to improve the basin(s) would fall to Normandy Park because they are the furthest downstream, and because they are less built out, and may actually have land on which to implement improvement projects. Burien and SeaTac are fully built out, and may not have space. Why should Normandy Park have to clean up everyone else's messes?

Response – The plan is in no way suggesting that Normandy Park should be unfairly burdened with costs or responsibilities. All of the project partners need to work together to improve conditions in the basins.

Comment – Reconstruction of an estuary on the Normandy Park Community Club is a fantasy that will not happen as long as the one vote veto is in place. The Community Club is committed to stream and salt marsh restoration, however.

Q: – In looking at stream water quality, is the project team considering conducting a B-IBI, rather than conducting discrete water quality sampling and analysis?

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A: – Mason Bowles, King County Ecologist, gave a brief overview of the B-IBI methodology. He also noted that B-IBI had previously been conducted for Miller Creek. He is looking for the source of that data. It shows Miller Creek at the bottom of the scale. The use of B-IBI will be considered by the project partners during development of recommendations.

Q: – What is the schedule for the plan?

A: – By the end of this year, a Draft Plan. In early 2004, more public involvement and a Final Plan.

In November and/or December 2003, the next round of public meetings, corresponding with the Draft Plan development.

Q: – What were the modeling assumptions about the Port's facilities – in vaults or not in vaults?

A: – It was modeled as reflected in the CSMP. This is a combination of vaults and ponds.

Note – The project partners have requested that the modelers perform an additional modeling run that presumes that the third runway and its resulting stormwater facilities are not constructed.

Q: – One participant said they had heard that the City of Burien was going to be imposing 100 ft buffers along streams. Is this likely to be the new standard?

A: – This is probably more detailed than the plan recommendations would get. This is more of an implementation detail. At this point, the plan is not contemplating specific land-use restrictions.

Q: – What are the metrics for success of this plan? How will we measure success?

A: – This is a tough question. Our goals are for “improvements” in water quality, in fish production from improved habitat, and in reduced flooding and erosion. Baseline data is non-existent or poor for several of these goals, and the plan will likely recommend monitoring to establish a baseline that the improvements can be measured against. The timelines for seeing improvements from many of these projects is decades long. Some projects may show results in 5 – 10 years. It really depends on what is implemented and how aggressively it is undertaken. The plan recommendations will have limited areas of influence. Specific numeric targets are pretty unrealistic when you can only impact portions of a problem.

Comment – One participant was concerned about de-icing chemicals and their impacts on stormwater – with or without the third runway.

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Comment – One citizen expressed concern over the potential impacts to the ecosystem if the earthen wall that the Port has proposed to build fails.

Response – This particular issue is a seismic stability issue and, although it is certainly a valid concern, it is not within the scope of the basin plan to perform engineering studies on the Port's earthen embankment.

Comment – One citizen was concerned that the presentation did not directly address the impacts that the port has or has historically had on the basins.

Response – There is no question that the Port's development has had impacts on the basins. It is also true, however, that all of the other development in the basins has also caused impacts. Highways, roads, and commercial and residential development have all contributed to the problems observed. It will take improvements on all fronts to protect and restore the basins.